

Amendments to the Claims

The listing of claims below will replace all prior versions and listings of claims in the present application.

Claim Listing

1 1. (Currently Amended) A computer-implemented method of rendering data for
2 producing a full parallax autostereoscopic display of a digital scene, comprising the steps
3 of:

4 defining an image plane that passes through at least a portion of said scene;
5 dividing the image plane into a plurality of contiguous image elements;
6 simulating two camera frustra on opposing sides of said image plane, each camera
7 frustrum having an associated eyepoint;

8 defining a near clipping plane of said frustra on said image plane;

9 for each image element, determining a distance between said eyepoint and said

10 near clipping plane that would avoid near clipping of said scene, thereby

11 determining a set of near clipping plane distances;

12 positioning said camera frustra along said a z axis in accordance with one or more
13 of said near clipping plane distances;

14 generating, for each of said elements, image data for each of said cameras; and

15 combining said image data, thereby rendering said scene.

1 2. (Original) The method of Claim 1, wherein the method is performed to
2 produce holograms, and wherein said generating step provides holographic image data.

1 3. (Original) The method of Claim 1, wherein said positioning step provides a
2 single near clipping plane distance for all of said elements.

1 4. (Original) The method of Claim 1, wherein said positioning step provides near
2 clipping plane distances within a predetermined range.

1 5. (Original) The method of Claim 1, further comprising the step of identifying

2 degenerate elements for which said determining step will not result in avoiding clipping.

1 6. (Original) The method of Claim 5, wherein the method is performed to
2 produce a hologram, and further comprising the step of rendering image data for said
3 degenerate elements by special compositing of images from said camera frustra.

1 7. (Original) The method of Claim 5, further comprising the step of rendering
2 image data for said degenerate elements by repositioning said camera frustra in a
3 direction parallel to said image plane.

1 8. (Original) The method of Claim 1, wherein said scene is comprised of
2 polygons, and said determining step compares z vertices of said polygons with a z
3 distance of said clipping plane.

1 9. (Original) The method of Claim 1, further comprising the step of evaluating
2 said image data for depth resolution and compensating said image data based on said
3 evaluating step.

1 10. (Currently Amended) A full parallax autostereoscopic print of a digital
2 scene, whose image data is rendered according to the following steps:
3 defining an image plane that passes through at least a portion of said scene;
4 dividing the image plane into a plurality of contiguous image elements;
5 simulating two camera frustra on opposing sides of said image plane, each camera
6 frustrum having an associated eyepoint;
7 defining a near clipping plane of said frustra on said image plane;
8 for each of said contiguous image elements, determining a distance between said
9 eyepoint and said near clipping plane that would avoid near clipping of
10 said scene, thereby determining a set of near clipping plane distances;
11 positioning said camera frustra along said a z axis in accordance with one or more
12 of said near clipping plane distances;
13 generating, for each of said contiguous image elements, image data for each of
14 said cameras; and combining said image data, thereby rendering said

15 scene.

1 11. (Currently Amended) A computer-readable medium whose contents cause a
2 computer system to render image data for a full parallax autostereoscopic display, by
3 performing the steps of:

4 defining an image plane that passes through at least a portion of said scene;
5 dividing the image plane into a plurality of contiguous image elements;
6 simulating two camera frustra on opposing sides of said image plane, each camera
7 frustrum having an associated eyepoint;
8 defining a near clipping plane of said frustra on said image plane;
9 for each of said contiguous image elements, determining a distance between said
10 eyepoint and said near clipping plane that would avoid near clipping of
11 said scene, thereby determining a set of near clipping plane distances;
12 positioning said camera frustra along said ~~a~~ z axis in accordance with one or more
13 of said near clipping plane distances;
14 generating, for each of said contiguous image elements, image data for each of
15 said cameras; and
16 combining said image data, thereby rendering said scene.

12-17. (Cancelled)